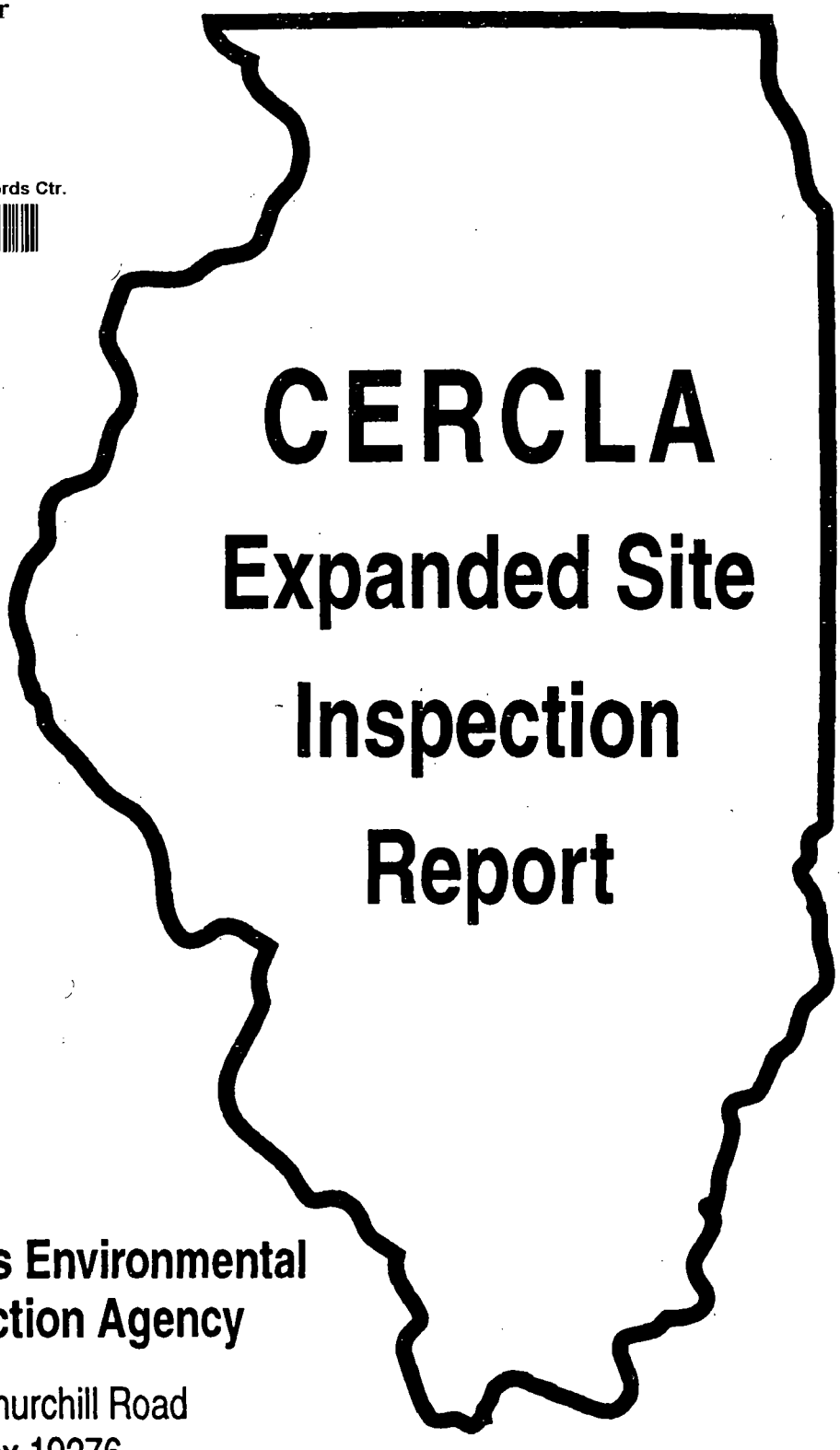
LPC# 1970450001 Will County
Lennon Wallpaper
ILD# 984779759
SF/HRS
volume 1 of 2



CERCLA Expanded Site Inspection Report

Illinois Environmental Protection Agency

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CERCLA EXPANDED SITE INSPECTION
Volume 1

for

LENNON WALLPAPER
I.D.# 984779759
JOLIET, ILLINOIS

PREPARED BY:
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BUREAU OF LAND
DIVISION OF REMEDIATION MANAGEMENT
FEDERAL SITE REMEDIATION SECTION
SITE ASSESSMENT UNIT

AUGUST 2000 9/13/00

EXPANDED SITE INSPECTION REPORT
LENNON WALLPAPER

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INTRODUCTION

The Illinois Environmental Protection Agency's (Illinois EPA) Site Assessment Unit was tasked by Region V of the United States Environmental Protection Agency (U.S. EPA) to conduct an Expanded Site Inspection of the Lennon Wallpaper site located in Joliet, Illinois. The Expanded Site Inspection is performed under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986, commonly known as SARA. The purpose of the Expanded Site Inspection is to gather information necessary to develop a CERCLA Hazard Ranking System (HRS) proposal. The information required may include characterizing sources and hazardous wastes, attributing contamination to sources at the site, identifying targets which may be at risk, collecting geologic and demographic information, and additional information which may not exist following previous CERCLA activities.

The Lennon Wallpaper site was placed on the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) on January 4, 1991. The site was placed on CERCLIS due to soil and sediment contamination found during a 1989 site inspection by the Illinois EPA.

In 1991 the Illinois EPA conducted a Preliminary Assessment at the Lennon Wallpaper site. A Screening Site Inspection was performed by the Illinois EPA in 1992. Following the Screening Site Inspection, the site proceeded to the Expanded Site Inspection stage of the investigatory process. In June 1995, Illinois EPA's Site Assessment Unit conducted the field activity portion of the CERCLA Expanded Site Inspection. The investigation consisted of the

collection of fourteen soil samples from the former Lennon Wallpaper facility and adjacent properties.

1.0 SITE BACKGROUND

1.1 SITE DESCRIPTION

The Lennon Wallpaper site consists of approximately 10 acres located near 807 Fourth Avenue in Joliet, Illinois. Specifically, the site is located in the Southwest 1/4 of the Northwest 1/4 of Section 14, Township 35 North, Range 10 East of the Third Principal Meridian in Will County. Surrounding the site are residential properties to the west and north, industrial properties to the northeast and east, and an abandoned rock quarry located to the south. A large wetland area can be found within the north-east portion of the site. Two industrial companies occupy properties near the site. United DeSoto operates a soap manufacturing business from the property to the northeast of the Lennon Wallpaper site. The second business, Ivex Corporation, utilizes property to the east of the site and operates a paper mill.

For HRS evaluation purposes, the site refers to the source of hazardous substances and areas of hazardous substance contamination. Within this Expanded Site Inspection report, the area containing hazardous substances includes portions of the abandoned Lennon Wallpaper facility and a wetland northeast of the Lennon Wallpaper facility. Throughout the remainder of this report, the Lennon Wallpaper site will refer to this total area impacted by hazardous substances.

Throughout this report, specific structures and parcels of property located within the Lennon Wallpaper facility will refer to a facility map located in Appendix B. During its

operational years Lennon Wallpaper occupied approximately 12 acres and consisted of 15 buildings. The buildings were generally located along the western portion of the site located parcels 1 and 6. The Lennon Wallpaper facility also included settling lagoons, storage pits, and a wastewater treatment system within parcels 3, 4, and 5. These structures were utilized as part of the manufacturing process of wallpaper and have been dismantled and removed since Lennon Wallpaper vacated the facility.

The site is generally flat with a gentle slope toward the north, northeast, and south. Surface water from the site appears to drain toward one of these three locations. To the north a small pond appears to collect surface water drainage from a small northern portion of the site and consists of approximately one acre. The northeast portion of the site contains cattails and other wetland plant species. This wetland consists of approximately six acres and appears to receive surface water runoff from the northern portion of the site. Located to the south is an abandoned rock quarry approximately 11 acres in size which receives surface water from the southern portion of the site. The rock quarry was utilized as a swimming beach until the early 1990's. From each of these three areas, surface water appears to be contained and does not migrate from the site.

In the early 1990's a six foot high chain link fence was constructed around portions of the Lennon Wallpaper site. The fence was constructed in order to prevent human intrusion into potentially contaminated areas. For the specific parcels around which the fencing in located, refer to the map located in Appendix B. Parcel 4 is completely enclosed by a fence and contains a locked gate. Parcel 5 is surrounded along the north, west, and southern boundaries by the fence. The eastern boundary of the fence has been removed in order for the current occupant to

access parcel 5. Parcels 1, 2, 3, and 7 can be accessed during normal business hours for two active businesses utilizing those specific areas. Parcel 6 is located along the southern portion of the property and is also surrounded by fencing. The wetland located east of parcel 5 also contains fencing around its perimeter. Although the fence surrounds portions of the site, several areas of the fence were observed to be broken thus allowing intrusion.

The most recent site observations were made during field activities in April 2000. Prior to field-based screening activities, a walk through of site was conducted. There were several areas of unvegetated soil which corresponded to elevated levels of contamination found during previous site investigations. Areas throughout the site, including the wetland to the northeast, contained layers of stained soil from the surface to depth of approximately one foot. The staining consisted of red, green, yellow, and blue coloring which is believed to be related to colors used in the wallpaper manufacturing process. Field screening determined that high levels of inorganic contamination correlated to areas which contained stained soils. A more detailed description of the field-based screening results is discussed in Section 2.2 of this report.

1.2 SITE HISTORY

The Lennon Wallpaper Company began operation of a wallpaper manufacturing facility in 1919 by Eugene and Joseph Lennon. The Lennon Wallpaper facility encompassed approximately 12 acres which consisted of developed and undeveloped property. In 1954 the Lennon brothers sold the majority of the companies interest to Mr. William Stricklen. In 1966 Mr. Stricklen sold partial ownership of the company to Mr. Walter Mueller. The companies assets were subsequently sold to Thomas Industries in 1981. In 1988 North American

Decorative Products purchased Thomas Industries. Throughout the entire chain of ownership, the Lennon Wallpaper facility continued to manufacture wallpaper. In 1989 operations at the Lennon Wallpaper facility ceased.

Information gathered from previous investigations revealed that during the operational history of Lennon Wallpaper, wastes and wastewater were reportedly dumped in areas adjacent to the facility. During the 1970's Lennon Wallpaper began operation of their own wastewater treatment system. As part of the treatment system, storage pits or settling ponds were used to gather wastewater prior to treatment. There were several reports from the 1970's which indicated that wastewater overflowed during periods of heavy rainfall. The sludge pits were reportedly filled in 1979. After 1979 a new wastewater treatment system began operating and is believed to have continued until operations ceased in 1989.

Following the closure of Lennon Wallpaper in 1989, Illinois EPA collected soil and sediment samples from locations throughout the site. The analysis of the samples indicated that significant levels of contamination existed. The analytical data provided the information needed for the Illinois EPA to issue a 4(q) notice to all responsible parties involved with the Lennon Wallpaper site. In April 1990 the 4(q) notice was issued to all responsible parties involved with the Lennon Wallpaper site. The 4(q) directed the responsible parties to conduct a Remedial Investigation and Feasibility Study (RI/FS) in order to address the adverse environmental conditions at the site. It appears that no action has been taken by any responsible party to satisfy conditions set forth by the 4(q) notice.

After Lennon Wallpaper stopped operations in 1989, portions of the original facility were acquired by several different entities. Some of the buildings were purchased for use as

warehouse space. Other parcels of the Lennon Wallpaper facility were purchased and used for storage of landscape material, bricks, cinder blocks, and other types of material. Other parcels still remain vacant. No portion of the facility participates in wallpaper manufacturing.

In April 2000, Illinois EPA's Site Assessment Unit collected field-based site characterization data from the Lennon Wallpaper site. Information was gathered to determine current levels of inorganic soil contamination throughout the site. The site characterization samples were collected from locations depicted in the 1995 sample collection plus additional suspected areas of contamination throughout the site. The information gathered during this activity indicated that significant levels of inorganic contamination still exists within the soils of the Lennon Wallpaper site.

2.0 EXPANDED SITE INSPECTION ACTIVITIES

2.1 SAMPLING ACTIVITIES

2.1.1 Soil Sampling

Fourteen soil samples were collected from thirteen locations on May 7 and 8, 1995 by the Illinois EPA. These samples were collected from the abandoned Lennon Wallpaper facility and adjacent residential properties. The samples were collected from the zero to six inches below the surface with a stainless steel trowel and analyzed for Target Compound List (TCL) analytes. A complete list of TCL compounds can be found in Appendix C. Figure 3 illustrates the approximate locations of each soil sample. Table 1 provides detailed information about each sample and its respective location. Table 2 provides a summary of analytical data while Table 3 provides sample data which has detected levels exceeding three times background

concentrations.

The soil samples were compared to background sample X101. This sample was collected from the playground at Woodland School located west of the Lennon Wallpaper site. The sample location exhibited a similar soil type with others collected during Expanded Site Inspection field activities. It also appeared that this location was not influenced by past industrial activities which took place at Lennon Wallpaper.

Samples X102 - X105 were collected from areas in or near the Lennon Wallpaper facility. These samples targeted locations suspected of containing structures which may have impacted the surrounding soil. These samples, in addition to soil samples collected during the 1992 Screening Site Inspection, were used to evaluate the impact that the Lennon Wallpaper facility had upon the shallow soils.

Samples X501 - X509 were collected from residential properties west and north of the Lennon Wallpaper facility. These sample locations were selected to determine if neighboring residential properties may have been impacted by past industrial activities at Lennon Wallpaper.

2.1.2 X-Ray Fluorescence Screening

On April 12 - 13, 2000 Illinois EPA personnel used an X-Ray Fluorescence (XRF) Spectrum Analyzer to screen soil from 61 locations throughout the site. This field-based site characterization technique was used to determine levels and extent of inorganic contamination within the soils of the site. Sample readings were taken from the surface up to 2.5 feet below the surface. It should be noted that XRF technology provides quantitative values for selected inorganic constituents but these values were not used in evaluating the site for HRS purposes.

Figure 4 illustrates locations for each XRF sample within the Lennon Wallpaper site. Table 4 provides analytical values for lead, arsenic, zinc, copper, iron, manganese, and chromium for each XRF sample.

2.2 ANALYTICAL RESULTS

Following sample collection, all samples were submitted to the laboratory for analysis of TCL constituents following chain-of-custody procedures and protocols outlined in the Illinois EPA workplan. Copies of the chain-of-custody forms are provided in Appendix F (volume 2 of the Expanded Site Inspection Report). A copy of the TCL is located in Appendix C. Organic analysis was conducted by Illinois EPA's Division of Laboratories located in Springfield, Illinois. Inorganic sample analysis was conducted by Illinois EPA's Division of Laboratories located in Champaign, Illinois. A quality assurance review of the sample analysis was performed by Illinois EPA's Division of Laboratories. Tables 2 provides a summary of all samples collected during the Expanded Site Inspection. The criteria used to determine what may be considered an observed release was based on samples at least three times background concentrations and are illustrated in Table 3.

The analytical results of soil samples X102 - X104 indicate significant levels of inorganic compounds; barium, cadmium, chromium, copper, lead, nickel, and zinc. The results also indicated varying levels of pesticide contamination within these samples. Sample X104, in addition to other types of contamination, detected significant levels of Polycyclic Aromatic Hydrocarbons (PAH's). The type of contamination is consistent with previous sample data collected from the Lennon Wallpaper facility.

The analysis of samples X501 - X509 revealed that varying low levels of semi-volatile, pesticide, and inorganic contamination exist within these residential properties. Although low levels of contamination exist, they do not appear to be directly attributable to the Lennon Wallpaper site.

Field-based site characterization data was collected in April 2000 using an XRF Spectrum Analyzer. The results indicated that lead, zinc, copper, and chromium were present at concentrations significantly above background at most locations throughout the site. The XRF data indicated levels of lead, copper, and chromium exceeded U.S. EPA Removal Action Level criteria at many locations. The highest lead value was detected at 59,955 ppm., the highest zinc value at 11,296 ppm., the highest copper value at 86,579 ppm., and the highest value for chromium was 15,795 ppm. A complete listing of XRF screening data can be found in Table 4. Although quantitative values are provided, data from this screening activity was not used to evaluate this site for HRS purposes.

3.0 SITE SOURCES

This section includes descriptions of the various hazardous waste sources which have been identified at the Lennon Wallpaper site during the CERCLA Expanded Site Inspection. Section 1.1 of the revised Hazard Ranking System defines a "source" as: "Any area where a hazardous substance has been stored, disposed or placed, plus those soils that have become contaminated from migration of a hazardous substance." This does not include surface water or sediments below surface water that has become contaminated.

3.1 CONTAMINATED SOIL

The area of contaminated soils has been identified as a portion of the Lennon Wallpaper facility and adjacent properties. Analysis of these samples detected levels of contamination at least three times background concentrations and are attributable to the manufacturing processes once used at Lennon Wallpaper. The process of wallpaper manufacturing utilized metal-based pigments and dyes which provided color to the final product. Although other types of contamination were detected throughout the area of contamination soil, the inorganic constituents were primarily focused upon during this evaluation.

Based on current information, the extent of this source is delineated by seven samples collected during the Screening Site Inspection and Expanded Site Inspection. Due to the fact that there are duplicate sample numbers in the two CERCLA field activities, those samples collected during the Expanded Site Inspection will be designated with an "ESI" notation. The extent of soil contamination was determined by using sample points X103, X109, X112, X105(ESI), X104 (ESI), X113, and X103 (ESI). The samples were collected within the upper two feet of soil and indicated elevated contamination attributable to past activities at Lennon Wallpaper. Using the location of these samples and a scaled map, an approximate area of 10 acres was delineated. Figure 5 illustrates the area of contaminated soil using these seven data points.

A large portion of this source is void of vegetation and would not prevent surface contamination from migrating into nearby ponds and wetlands. Most of the source area appears to be surrounded by a secured fence but there are signs of intrusion due to holes within the fence. The source area is not located within a flood plain.

During April 2000 field screening activities, Illinois EPA observed discolored soil within the source area. Upon further investigation, these discolored soils were analyzed using the XRF Spectrum Analyzer. The XRF indicated that levels of lead, copper, and chromium exceeded USEPA Removal Action Levels. Although laboratory samples were not collected, the XRF data indicated that additional investigation is warranted within the area of contaminated soil.

4.0 MIGRATION PATHWAYS

The CERCLA Hazard Ranking System identifies three migration pathways and one exposure pathway by which hazardous substances may pose a threat to human health and the environment. Consequently, sites are evaluated on their known or potential impact to these four pathways. The pathways evaluated are groundwater migration, surface water migration, soil exposure, and air migration.

4.1 GROUNDWATER

The geologic composition of the Lennon Wallpaper area is unconsolidated glacial and recent alluvial deposits overlying Silurian-age dolomite bedrock. The unconsolidated deposits consist of glacial till, sand, and gravel deposits along with recent silt and clay alluvial deposits. Within these deposits, a shallow water yielding aquifer can be found. Typically in the area, the alluvial deposits continue until reaching bedrock which can range from zero to 100 feet below the surface. Site specifically, the bedrock is estimated to be approximately 20 feet below the surface.

According to Illinois EPA file information, the City of Joliet obtains water from 14 wells.

Five wells are screened in a shallow sand and gravel aquifer and are located over four miles to the northwest and west of the site. One well is located approximately 2,000 feet northeast of the site and is finished to a depth of 1,608 feet below the surface. A review of Illinois State Water Survey records and information from the City of Joliet indicate there are approximately 3,236 domestic wells located within four miles of the site. It is within the shallow aquifer that most of the domestic wells obtain their groundwater with the closest slightly over 1/4 mile southeast of the site.

No ground water samples were collected during the Expanded Site Inspection.

4.2 SURFACE WATER

As stated earlier within this report, the site is generally flat with a slight slope to the north, northeast, and south. Surface water flow from the site appears to migrate in one of these three directions. Excess surface water flow from the site appears to collect within a rock quarry to the south, a small pond to the north, or wetlands to the northeast. Surface water does not appear to migrate from these areas into any adjacent surface water body.

There are two ponds located adjacent to the Lennon Wallpaper site, one to the north and one to the south. During reconnaissance activities in April 2000, Illinois EPA personnel utilized field-base site characterization techniques to determine if inorganic contamination was present near these two ponds. There is no evidence which suggests that the two ponds contain any inorganic contamination from the Lennon Wallpaper site.

There is a wetland encompassing approximately six acres to the northeast of the abandoned Lennon Wallpaper facility. The wetland consists of a low lying area containing

cattails and other wetland plant species. Since this wetland area is not part of a discernable surface water route nor is it contiguous with one, it can not be evaluated under the surface water pathway for HRS purposes. It will be evaluated as a terrestrial sensitive environment and discussed within Section 4.3 (Soil Exposure Pathway) of this report.

4.3 SOIL EXPOSURE

Wallpaper manufacturing activities no longer occur on the Lennon Wallpaper site. Although manufacturing activities ceased in 1989, waste material still exists on the site. Visual observations made in April 2000 indicate soils within the site are stained with pigments and dyes once used in the wallpaper manufacturing process. There are several fences which limit access to most of the site, however there are still signs of intrusion to known areas of contaminated soil.

Using U.S. Geological Survey topographical maps and U.S. Census Data, an estimated 9,735 people reside within 1 mile of the site. The nearest resident is located less than 200 feet from the site. Woodlawn School is located approximately 300 feet west of the site. Woodlawn School contains approximately 200 students.

Soil samples were collected from thirteen locations during Expanded Site Inspection field activities. Samples X102 - X105 were collected from areas within or near the abandoned Lennon Wallpaper facility. Levels of semi-volatile and inorganic contamination were detected at concentrations significantly above background conditions. When the data from the Expanded Site Inspection is linked with data generated from the Screening Site Inspection, an area of 10 acres of contaminated soil can be delineated for the site. A complete description of the contaminated soil source is provided in Section 3.1.

In April 2000, field-based site characterization technology was used to gather additional soil screening data from the Lennon Wallpaper site. The evaluation of the data concluded that levels of lead, copper, and chromium exceed U.S. EPA Removal Action Level criteria.

Soil samples were collected from eight residential locations during the Expanded Site Inspection. Various low levels of contamination was detected in four properties. The nature and distribution of the contamination did not indicate complete attribution the Lennon Wallpaper site.

Nearby population within 1-mile of the site

Distance (mi)	Population
0 - 1/4	477
1/4 - 1/2	2530
½ - 1	2728
Total	**9735**

4.4 AIR ROUTE

No formal air samples were collected during the 1995 Expanded Site Inspection. Although no air samples were collected, analysis of the shallow soils throughout the site indicated elevated levels of semi-volatile and inorganic contamination. There is a potential for wind blown particulates to be carried from the property since contamination has been found in the shallow soil and some of these areas are unvegetated. Information from the Agency for Toxic Substances and Disease Registry indicates dust containing lead and chromium can have adverse health affects if inhaled. Both lead and chromium have been detected at elevated levels

within shallow soils on the site. An estimated 106,026 people live within a 4-mile radius of the site. An elementary school is located approximately 300 feet west of the site.

Individuals potentially exposed to air-borne contaminants

Distance (mi)	Population
0 - 1/4	477
0 - ½	2530
½ - 1	6728
1 - 2	34,043
2 - 3	32,865
3 - 4	29,383
Total	**106,026**

5.0 REFERENCES

Bureau of the Census: 1990 U.S. Census of Population and Housing-Summary Population and Housing Characteristics: Illinois, August 1991

Illinois Department of Transportation aerial photographs, Bureau of Location and Environment, Aerial Survey Section

Illinois Environmental Protection Agency, Bureau of Land: file for Lennon Wallpaper, LPC# 197 045 0001

Rainfall Frequency Atlas of the United States, Technical Paper Number 40, U.S. Department of Commerce, U.S. Government Printing Office, Washington, D.C., 1963

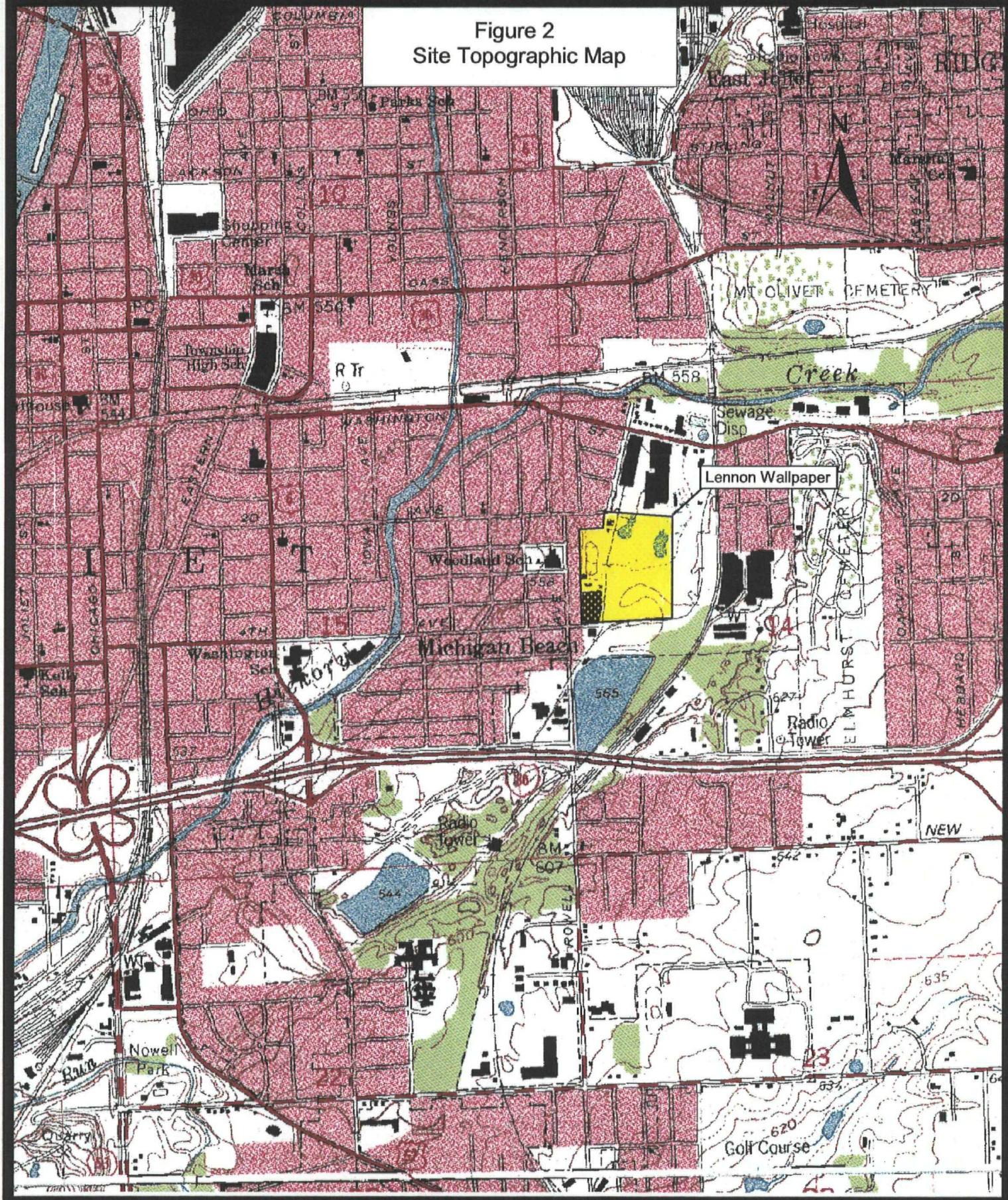
U.S. Department of Health and Human Services, Toxicological Profile for Lead, February 1992

Agency for Toxic Substance and Disease Registry, Tox FAQ's for Lead and Chromium, ATSDR web site; http://www.atsdr.cdc.gov/toxfaq.html

FIGURES AND TABLES

Figure 1
Site Location Map

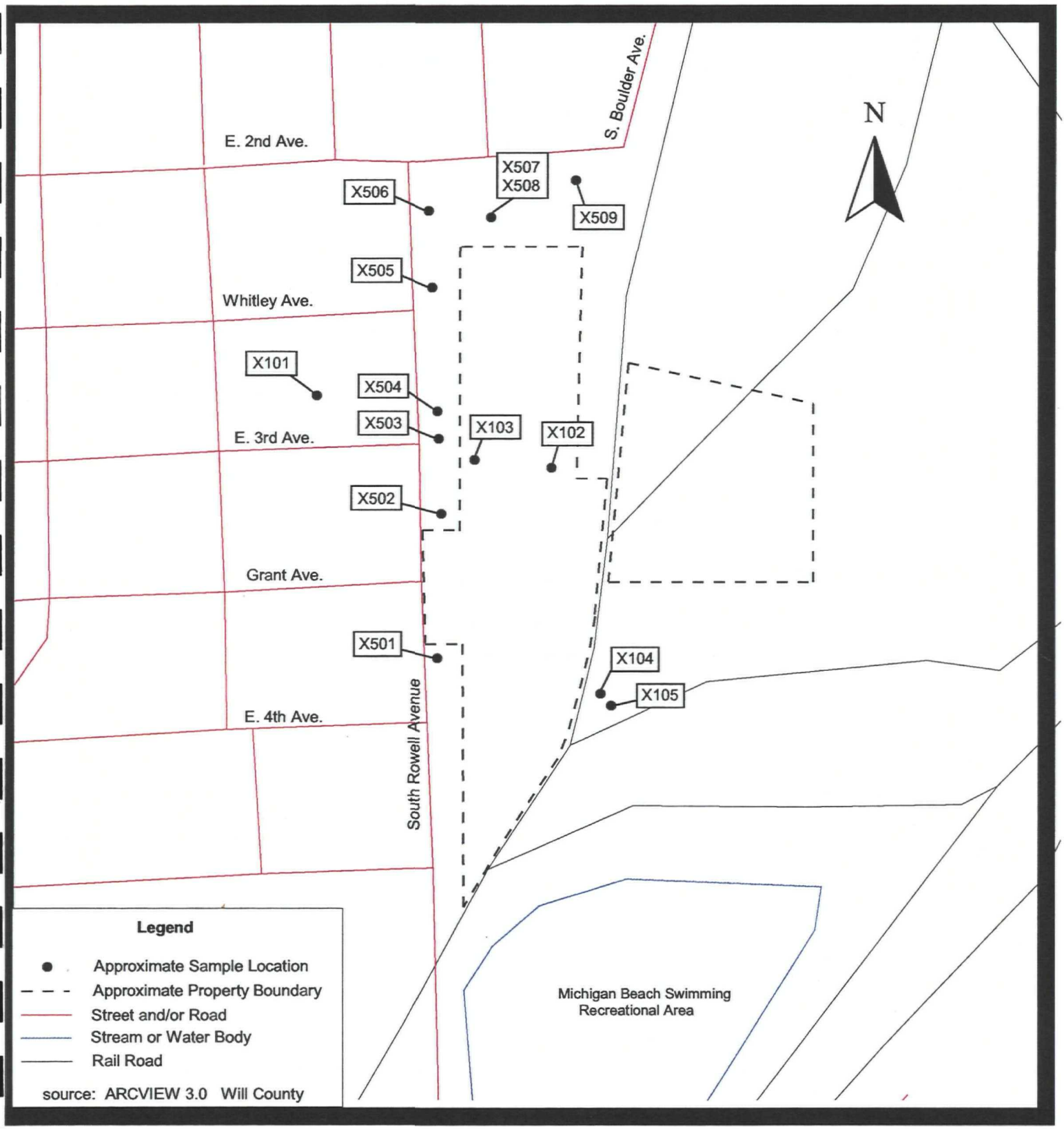
Figure 2
Site Topographic Map



Map Scale

1000 0 1000 2000 3000 Feet

Figure 3
Sample Location Map
Lennon Wallpaper
ILD #984779759



Map Scale

300 0 300 600 Feet

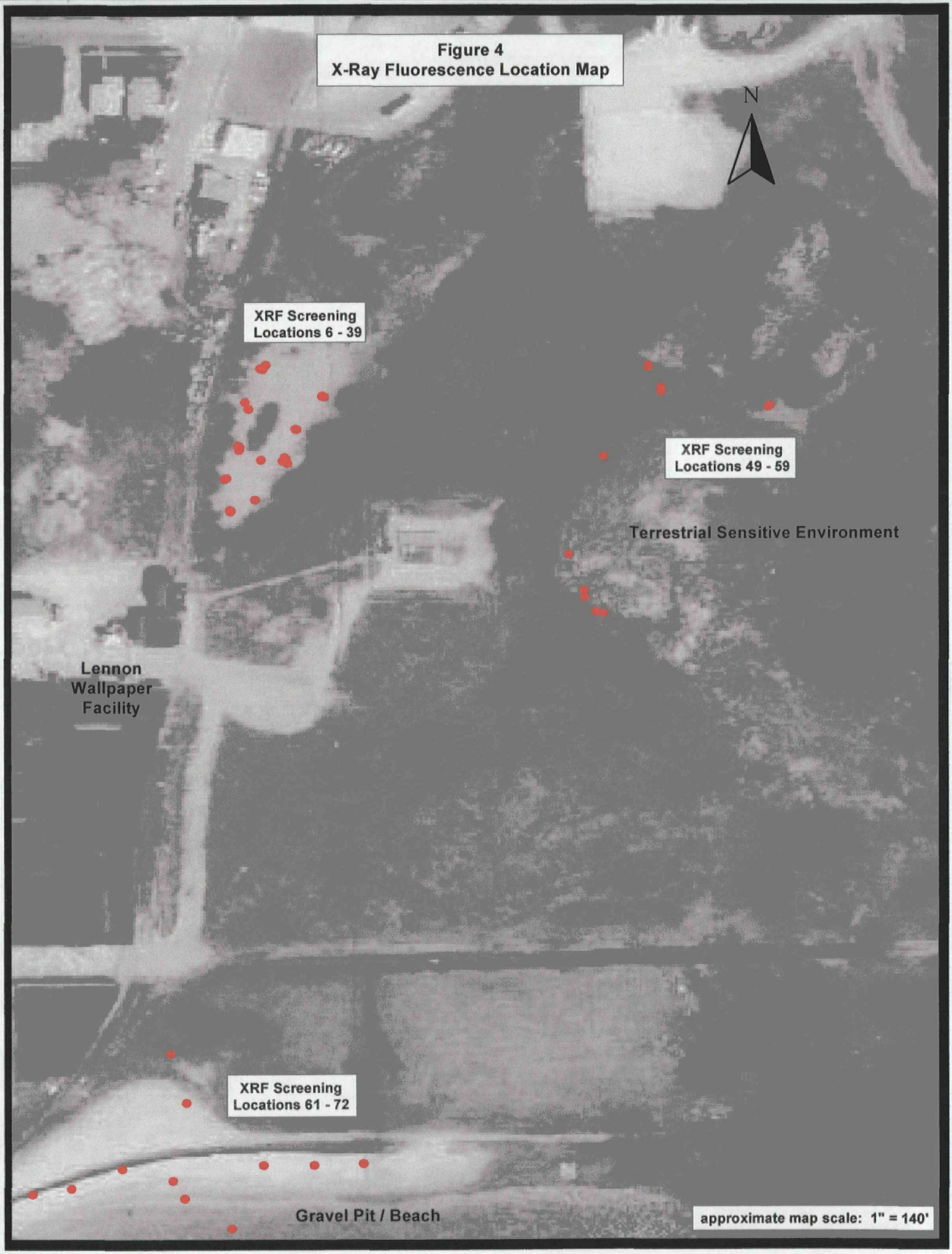


Figure 4
X-Ray Fluorescence Location Map
N
XRF Screening
Locations 6 - 39
XRF Screening
Locations 49 - 59
Terrestrial Sensitive Environment
Lennon
Wallpaper
Facility
XRF Screening
Locations 61 - 72
Gravel Pit / Beach
approximate map scale: 1" = 140'

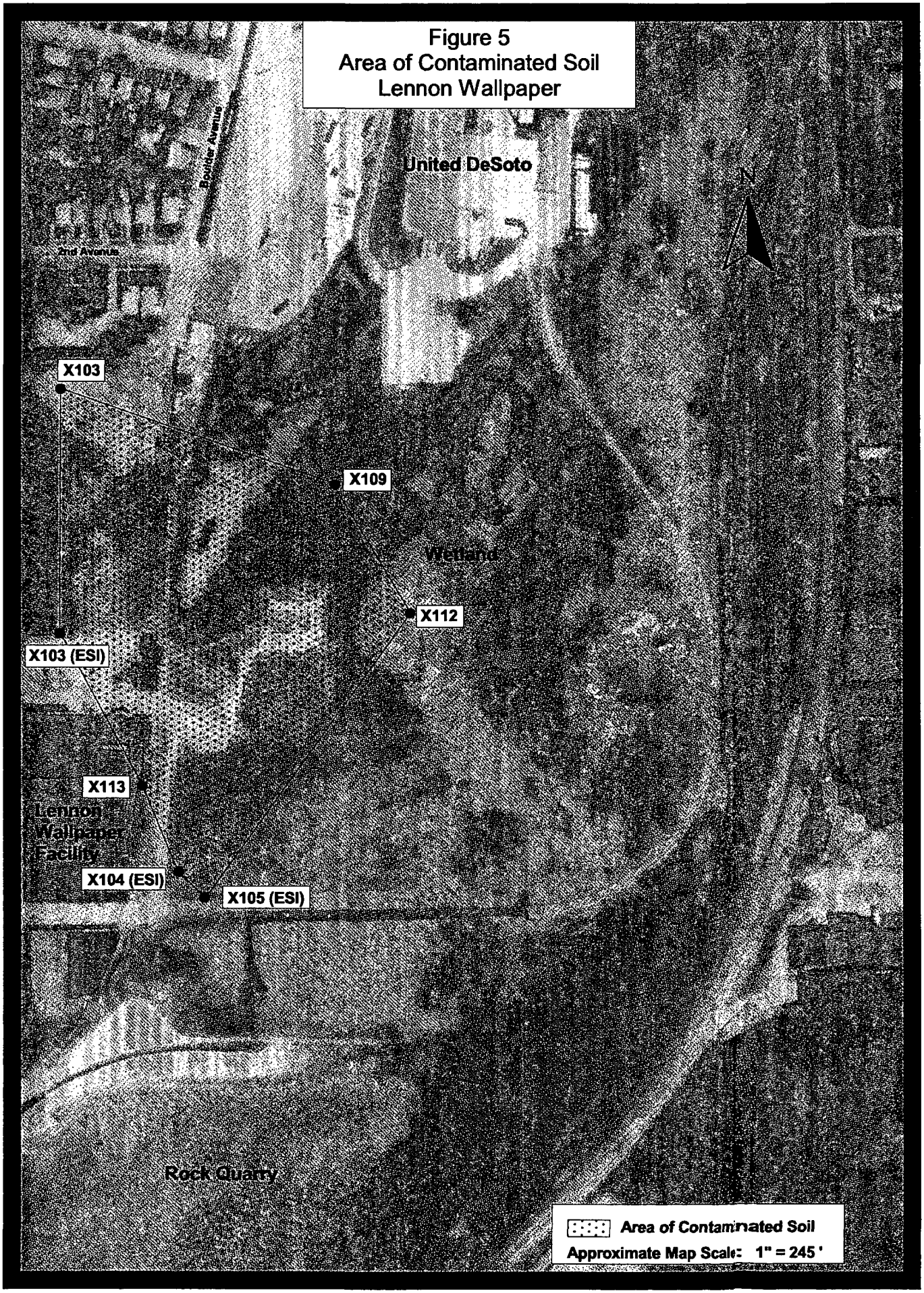


Figure 5
Area of Contaminated Soil
Lennon Wallpaper
United DeSoto
Border Avenue
2nd Avenue
N
X103
X109
Wetland
X112
X103 (ESI)
X113
Lennon Wallpaper Facility
X104 (ESI)
X105 (ESI)
Rock Quarry
Area of Contaminated Soil
Approximate Map Scale: 1" = 245 '

TABLE 1
SOIL SAMPLE DESCRIPTIONS

SAMPLE	DEPTH	APPEARANCE	LOCATION
X101	1 - 12 inches	dark brown silty loam with some rock	Collected from a play ground area at Woodland School located at the corner of Rowell Avenue and Third Avenue
X102	0 - 12 inches	Not available	Collected northwest of the waste water treatment plant
X103	1 - 6 inches	light-medium brown sandy, silty mix with a green/orange substance	Collected northwest of the entrance gate to the fenced portion of the northwest portion of the facility, north of the large warehouse building
X104	1 - 5 inches	medium to dark brown loam with sand, silt, and gravel (also debris)	Collected east of the Lennon property and north of Michigan Beach Swimming Club
X105	0.5 - 5 inches	medium brown clay with pebbles	Collected east of the Lennon property and north of Michigan Beach Swimming Club and southeast of Sample X104
X501	1 - 4 inches	dark brown loam	Collected from a residential yard located at 354 Rowell Avenue, west of the Lennon facility
X502	1 - 4 inches	dark brown loam	Collected from a residential yard located at 304 Rowell Avenue, west of the Lennon facility
X503	0 - 4 inches	dark brown loam	Collected from a residential yard located at 234 Rowell Avenue, west of the Lennon facility
X504	1 - 5 inches	dark brown loam	Collected from a residential yard located at 226 Rowell Avenue, west of the Lennon facility
X505	0.5 - 12 inches	dark brown loam	Collected from a residential yard located at 216 Rowell Avenue, northwest of the Lennon facility
X506	1 - 12 inches	dark brown loam	Collected from a residential yard located at 208 Rowell Avenue, northwest of the Lennon facility
X507/X508	0 - 4 inches	dark brown clayey loam	Collected from an apartment building courtyard located at 806-816 Second Avenue, north of the Lennon facility
X509	1 - 12 inches	dark brown loam	Collected from a residential yard located at 820 Second Street, north of the Lennon facility

Lennon Wallpaper
ILD 984779759

TABLE 2
ANALYTICAL SAMPLE SUMMARY

IEPA SAMPLE ID	X101	X102	X103	X104	X105	X501	X502	X503	X504	X505	X506	X507	X508	X509
DATE COLLECTED	6-8-95	6-7-95	6-7-95	6-7-95	6-7-95	6-7-95	6-7-95	6-7-95	6-7-95	6-8-95	6-8-95	6-8-95	6-8-95	6-8-95
SAMPLE DEPTH			1 - 6 in.	1 - 5 in.	0.5 - 5 in.	1 - 4 in.	1 - 4 in.	0 - 4 in.	1 - 5 in.			0 - 6 in.		
DESCRIPTION													*dup. of X507*	
VOLATILES (ppb)														
Methylene Chloride	12 U	---	26 J	20	---	10 J	9 J	---	---	---	---	---	---	---
1,1,1-Trichloroethane	15	9 J	18 J	14 J	11 J	21	16 J	23 J	6 J	13 J	12 J	4 J	5 J	16
Xylene (total)	3 J	---	---	---	---	---	---	---	---	---	---	---	---	---
SEMI-VOLATILES (ppb)														
1,4-Dichlorbenzene	400 U	750	3200	---	---	---	---	---	---	---	---	---	---	---
Napthalene	*400 U*	---	---	*100 J*	---	---	---	---	---	---	---	---	---	---
2-Methylnaphthalene	400 U	---	---	85 J	---	---	---	---	---	---	---	---	---	---
2-Nitroaniline	960 U	99 J	---	---	---	---	---	---	---	---	---	---	---	---
Acenaphthylene	400 U	---	---	78 J	---	---	---	---	---	---	---	---	---	---
Dibenzofuran	400 U	---	---	170 J	---	---	---	---	---	---	---	---	---	---
Fluorene	400 U	---	---	440	---	---	---	---	---	---	---	---	---	---
Pentachlorophenol	960 U	980 J	6300 J	---	---	---	---	---	---	---	---	---	---	---
Phenanthrene	400 U	---	---	3700 E	190 J	570	240 J	470	400	200 J	100 J	---	---	180 J
Carbazole	400 UJ	---	---	690	---	100 J	---	---	---	---	---	---	---	---
Fluoranthene	130 J	---	---	4200 E	290 J	890	440	780	620	740	190 J	---	---	250 J
Pyrene	120 J	---	---	3300 E	220 J	740	350 J	610	580	540	180 J	---	---	190 J
Benzo(a)Anthracene	400 U	---	---	2700	220 J	460	220 J	380 J	380 J	620	---	---	---	140 J
Chrysene	400 U	---	---	2300	180 J	480	230 J	400	320 J	480	120 J	---	---	140 J
bis(2-Ethylhexyl)Phthalate	1000	---	---	---	100 J	270 J	270 J	520	150 J	---	290 J	84 J		210 J
Benzo(b)Fluoranthene	400 UJ	---	---	2500	530 J	1000	530	900	750	1200 J	---	---	---	---
Benzo(k)Fluoranthene	400 U	---	---	1900 J	---	---	---	---	---	---	---	---	---	---
Benzo(a)Pyrene	400 U	---	---	2100	---	390 J	190 J	320 J	300 J	410	---	---	---	---
Ideno(1,2,3-cd)Pyrene	400 U	---	---	1200 J	---	200 J	---	---	---	---	---	---	---	---
Benzo(g,h,i)Perylene	400 U	---	---	690 J	---	---	---	---	---	---	---	---	---	---
PESTICIDES (ppb)														
alpha-BHC	2 U	---	---	---	---	---	---	---	---	---	---	---	---	0.34 J
beta-BHC	0.14 JP	---	---	1.4 JP	---	---	---	---	2.5 P	---	---	---	---	---
delta-BHC	2 U	19 P	62	---	---	---	---	---	---	---	---	---	---	---
gamma-BHC (Lindane)	2 U	---	---	1.7 JP	---	---	---	---	---	0.24 JP	---	---	---	---
Heptachlor	2 U	---	---	0.25 JP	---	0.42 JP	---	0.2 JP	---	0.17 JP	---	---	---	0.71 JP
Aldrin	2 U	---	---	4.9	1.3 JP	---	---	---	1.2 J	0.73 JP	---	---	---	---
Heptachlor epoxide	0.79 JP	---	---	2.2		2.7 P	1.3 JP	1.9 J	1.4 JP	1 JP	---	---	---	72 P
Dieldrin	0.81 JP	---	---	---	0.45 JP	1.1 JP	---	1.6 JP	8 P	1.1 JP	0.51 JP	0.48 JP	0.34 JP	13 P
4,4-DDE	12	42 P	12 P	---	---	13	---	---	---	15	18	---	---	89
Endrin	3.9 U	---	19 P	24	---	---	---	11	---	9	2.3 JP	0.71 JP	0.98 JP	---
Endosulfan II	2.2 J	---	---	---	---	---	---	3.8 JP	---	---	---	0.36 JP	0.5 J	---
4,4-DDD	1.7 JP	---	---	2.7 JP	0.92 JP	4 JP	1.6 JP	3.7 JP	1.6 JP	2.7 JP	2.6 JP	0.67 J	0.65 J	10
Endosulfan sulfate	2.2 JP	---	---	---	1.3 JP	---	1.5 JP	---	1.5 JP	2.5 JP	3 J	---	---	4.4 P
4,4-DDT	7.9	240	32 P	---	0.70 JP	11 P	6.3 P	7.2 P	5 P	30	19 P	0.41 JP	0.51 JP	59
Methoxychlor	20 U	4.4 JP	36	---	---	---	---	---	---	---	2.2 JP	---	1.5 JP	---
Endrin ketone	3.9 U	3.6 JP	---	---	1.4 JP	---	---	---	---	---	---	---	---	---
alpha-Chlordane	0.52 JP	28 P	---	---	---	---	---	---	---	---	---	0.51 JP	---	140
gamma-Chlordane	2 U	---	3.2 P	3.4	1 J	2.2 JP	0.73 JP	1.7 J	1.2 JP	1.4 JP	---	---	---	39 P
Toxaphene	3.9 U	---	---	---	---	77 JP	---	61 JP	50 JP	---	---	---	---	---
Arochlor-1254	17 JP	---	---	---	---	---	---	---	---	---	---	---	---	---
Arochlor-1260	24 JP	---	---	87 P	22 JP	100	37 JP	83	---	37 JP	50	5.6 JP	9.9 JP	47 P
INORGANICS (ppm)														
Aluminum	10500	8430	8900	11200	7690	7730	9350	10400	12300	10900	12900	15200	16600	12100
Antimony	8.3 U	41.3	48.3	11.6 B	---	---	---	---	---	---	---	---	---	---
Arsenic	7.8	6.6	13.1	15.6	14.8	26.9	12.9	11.4	13.1	17	12.6	6.9	7.9	67.5
Barium	93.8	11600	13900	222	88.7	221	136	135	150	220	114	162	177	133
Beryllium	0.85 B	0.69 B	0.49 B	2	0.95	2	1.2 B	1.2	1.2	1.4	1.1 B	0.81 B	0.85 B	0.98 B
Cadmium	1.2 U	120	23.5	3.2	---	3.3	2	3.7	1.6	3.7	1.5	---	---	---
Calcium	30900	4550	21900	81300	64400	71100	56900	36100	16500	35500	15000	2980	3130	22600
Chromium	15.1	542	901	79.3	15	18.7	16.1	36.9	18.9	18.6	18.8	18	19.4	18.4
Cobalt	8.5 B	6.8	6.4 B	12	10.1	11.1 B	9.3 B	11.4	11	10.2	9.6 B	11.1 B	14.7	11.8 B
Copper	23.4	1620	13000	168	33.5	71.8	46.2	47.7	39.1	48.2	31.8	15.3	15.2	34.7
Iron	19500	21500	29700	54700	25500	25400	26800	26200	29000	28200	27100	20300	21400	23000
Lead	97.6	2240	3650	1540	38.9	453	310	203	270	484	120	28.2	34.7	106
Magnesium	17400	2710	11900	36300	35600	37300	29600	19300	8220	16300	8110	3000	3210	12700
Manganese	803	590	817	1820	580	485	921	925	989	1040	1160	1010	1290	1160
Mercury	0.08 B	0.13	0.14 B	0.21	0.06	0.223	0.19	0.62	0.18	0.23	0.14	0.03 B	0.04 B	0.14
Nickel	13.5	18.1	10.3	89.2	25.9	22.7	21.7	19.5	21.4	21.7	18.7	14.5	16.6	19.3
Potassium	1910	---	477 B	1230	1400	1170 B	1620	1590	2140	1760	1890	1530	1850	1830
Selenium	1.2 U	---	---	0.24 B	---	0.68 B	---	---	---	---	---	---	---	---
Sodium	73.9 U	188 B	435 B	730 B	235 B	220 B	147 B	141 B	111 B	188 B	127 B	---	---	88.8 B
Thallium	0.29 B	---	---	0.28 B	0.46 B	0.71 B	0.42 B	0.33 B	0.33 B	0.43 B	0.37 B	0.23 B	0.27 B	0.32 B
Vanadium	25.1	30.2	32.3	32.3	18.8	23.5	25.8	28	30.5	29.8	34.4	33.7	38.8	29.9
Cyanide	0.61 U	1.2	3.5	1.1	---	---	---	0.6	---	---	---	---	---	---
Zinc	147	6110	2590	1080	110	609	274	245	305	735	162	70.2	72	139

Data Qualifiers

U - indicates the compound was not detected

J - indicates an estimated value

B - indicates the analyte was detected in the associated blank as well as in the sample

E - indicates compounds whose concentrations exceed the calibration range of the instrument

P - indicates a pesticide target analyte when there is 25% difference of the directed concentrations between the two GC columns

Lennon Wallpaper
ILD 984779759

TABLE 3
KEY SAMPLE SUMMARY

IEPA SAMPLE ID	X101	X102	X103	X104	X105	X501	X502	X503	X504	X505	X506	X507	X508	X509
DATE COLLECTED	6-8-95	6-7-95	6-7-95	6-7-95	6-7-95	6-7-95	6-7-95	6-7-95	6-7-95	6-8-95	6-8-95	6-8-95	6-8-95	6-8-95
SAMPLE DEPTH			1 - 6 in.	1 - 5 in.	0.5 - 5 in.	1 - 4 in.	1 - 4 in.	0 - 4 in.	1 - 5 in.			0 - 6 in.		
DESCRIPTION													dup. of X507	
VOLATILES (ppb)														
Methylene Chloride	12 U	----	26 U	----	----	----	----	----	----	----	----	----	----	----
SEMI-VOLATILES (ppb)														
1,4-Dichlorbenzene	400 U	750	3200	----	----	----	----	----	----	----	----	----	----	----
Fluorene	400 U	----	----	440	----	----	----	----	----	----	----	----	----	----
Pentachlorophenol	960 U	980 J	6300 J	----	----	----	----	----	----	----	----	----	----	----
Phenanthrene	400 U	----	----	3700 E	----	570	----	470	----	----	----	----	----	----
Carbazole	400 UJ	----	----	690	----	----	----	----	----	----	----	----	----	----
Fluoranthene	130 J	----	----	4200 E	----	890	440	780	620	740	----	----	----	----
Pyrene	120 J	----	----	3300 E	----	740	----	610	580	540	----	----	----	----
Benzo(a)Anthracene	400 U	----	----	2700	----	460	----	----	----	620	----	----	----	----
Chrysene	400 U	----	----	2300	----	480	----	400	----	480	----	----	----	----
bis(2-Ethylhexyl)Phthalate	1000	----	----	----	----	----	----	----	----	•	----	----	----	----
Benzo(b)Fluoranthene	400 UJ	----	----	2500	530 J	1000	530	900	750	1200 J	----	----	----	----
Benzo(k)Fluoranthene	400 U	----	----	1900 J	----	----	----	----	----	----	----	----	----	----
Benzo(a)Pyrene	400 U	----	----	2100	----	----	----	----	----	410	----	----	----	----
Ideno(1,2,3-cd)Pyrene	400 U	----	----	1200 J	----	----	----	----	----	----	----	----	----	----
Benzo(g,h,i)Perylene	400 U	----	----	690 J	----	----	----	----	----	----	----	----	----	----
PESTICIDES (ppb)														
beta-BHC	0.14 JP	----	----	1.4 JP	----	----	----	----	2.5 P	----	----	----	----	----
delta-BHC	2 U	19 P	62	----	----	----	----	----	----	----	----	----	----	----
Aldrin	2 U	----	----	4.9	----	----	----	----	----	----	----	----	----	----
4,4-DDE	12	42 P	----	----	----	----	----	----	----	----	----	----	----	89
Endrin	3.9 U	----	19 P	24	----	----	----	11	----	9	----	----	----	----
4,4-DDT	7.9	240	32 P	----	----	----	----	----	----	30	----	----	----	59
Methoxychlor	20 U	----	36	----	----	----	----	----	----	----	----	----	----	----
alpha-Chlordane	0.52 JP	28 P	----	----	----	----	----	----	----	----	----	----	----	140
gamma-Chlordane	2 U	----	3.2 P	3.4	----	2.2 JP	----	----	----	----	----	----	----	39 P
Toxaphene	3.9 U	----	----	----	----	77 JP	----	61 JP	50 JP	----	----	----	----	----
Arochlor-1260	24 JP	----	----	----	----	100	----	83	----	----	----	----	----	----
INORGANICS (ppm)														
Antimony	8.3 U	41.3	48.3	11.6 B	----	----	----	----	----	----	----	----	----	----
Arsenic	7.8	----	----	----	----	26.9	----	----	----	----	----	----	----	67.5
Barium	93.8	11600	13900	222	----	----	----	----	----	----	----	----	----	----
Cadmium	1.2 U	120	23.5	3.2	----	3.3	2	3.7	1.6	3.7	1.5	----	----	----
Chromium	15.1	542	901	79.3	----	----	----	----	----	----	----	----	----	----
Copper	23.4	1620	13000	168	----	71.8	----	----	----	----	----	----	----	----
Lead	97.6	2240	3650	1540	----	453	310	----	----	484	----	----	----	----
Mercury	0.08 B	----	----	----	----	----	----	0.62	----	----	----	----	----	----
Nickel	13.5	----	----	89.2	25.9	----	----	----	----	----	----	----	----	----
Sodium	73.9 U	188 B	435 B	730 B	235 B	220 B	147 B	141 B	111 B	188 B	127 B	----	----	88.8 B
Cyanide	0.61 U	1.2	3.5	1.1	----	----	----	0.6	----	----	----	----	----	----
Zinc	147	6110	2590	1080	----	609	----	----	----	735	----	----	----	----

Data Qualifiers

U - indicates the compound was not detected

J - indicates an estimated value

B - indicates the analyte was detected in the associated blank as well as in the sample

E - indicates compounds whose concentrations exceed the calibration range of the instrument

P - indicates a pesticide target analyte when there is 25% difference of the directed concentrations between the two GC columns

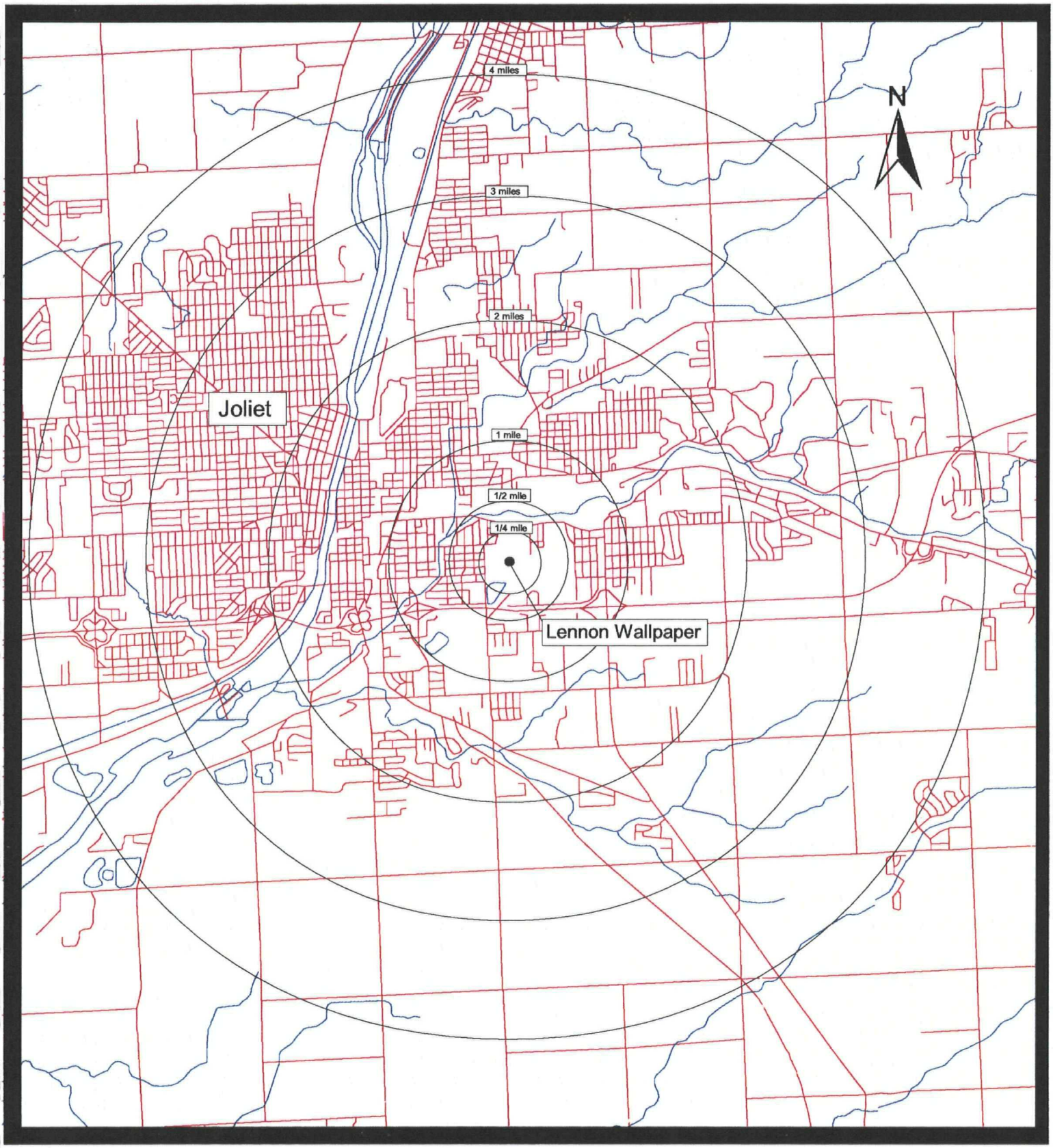
TABLE 4
Lennon Wallpaper
Expanded Site Inspection
X-Ray Fluorescence Screening Data

XRF No.	Depth	Date	Pb (lead)	As (arsenic)	Zn (zinc)	Cu (copper)	Fe (iron)	Mn (manganese)	Cr (chromium)
6	surface	04/12/2000	5600	N.D.	4400	28492.8	9446.4	1140	N.D.
7	6 - 8 in.	04/12/2000	3209.6	N.D.	2969.6	19097.6	12800	1069.6	698.4
8	1 ft.	04/12/2000	2449.6	N.D.	9529.6	16499.2	14899.2	N.D.	3478.4
9	surface	04/12/2000	8224	N.D.	3427.2	20889.6	13299.2	N.D.	1729.6
11	6 in.	04/12/2000	3228.8	N.D.	9094.4	86579.2	21491.2	N.D.	1889.6
12	1 ft.	04/12/2000	5049.6	N.D.	4729.6	40192	4988.8	N.D.	647.2
13	surface	04/12/2000	8057.6	N.D.	4387.2	24896	13388.8	N.D.	3028.8
14	6 in.	04/12/2000	7916.8	N.D.	5388.8	51276.8	14489.6	N.D.	4307.2
15	1 ft.	04/12/2000	4508.8	N.D.	2668.8	19699.2	11296	N.D.	1129.6
17	surface	04/12/2000	9075.2	N.D.	4348.8	24793.6	14297.6	N.D.	2409.6
18	6 in.	04/12/2000	8864	N.D.	2680	14592	11398.4	N.D.	2249.6
19	1 ft.	04/12/2000	6585.6	N.D.	1739.2	20492.8	12998.4	N.D.	1040
20	surface	04/12/2000	4678.4	N.D.	1620	8198.4	10297.6	N.D.	1649.6
22	6 in.	04/12/2000	16089.6	N.D.	2080	14592	18099.2	N.D.	2609.6
23	1 ft.	04/12/2000	4649.6	N.D.	1369.6	6585.6	7065.6	N.D.	633.6
25	surface	04/12/2000	5539.2	N.D.	2800	13196.8	11398.4	N.D.	1160
26	6 in.	04/12/2000	15398.4	N.D.	6400	31897.6	15692.8	N.D.	2908.8
27	1 ft.	04/12/2000	9747.2	N.D.	1560	7878.4	9068.8	N.D.	901.6
28	surface	04/12/2000	6809.6	N.D.	3737.6	24192	12396.8	1529.6	1349.6
29	6 in.	04/12/2000	29875.2	N.D.	3068.8	17088	20390.4	N.D.	3408
30	1 ft.	04/12/2000	5888	N.D.	3000	21094.4	11897.6	N.D.	1180
31	surface	04/12/2000	7219.2	N.D.	6278.4	37094.4	16896	N.D.	2499.2
32	6 in.	04/12/2000	5817.6	N.D.	2929.6	14092.8	12396.8	N.D.	1420
33	1 ft.	04/12/2000	3718.4	N.D.	2579.2	7398.4	10694.4	N.D.	N.D.
34	surface	04/12/2000	12396.8	N.D.	5408	30387.2	21299.2	N.D.	4297.6
35	6 in.	04/12/2000	12396.8	N.D.	4067.2	24294.4	18099.2	N.D.	2988.8
36	1 ft.	04/12/2000	4508.8	N.D.	2339.2	12198.4	11296	N.D.	1689.6
37	surface	04/12/2000	3987.2	N.D.	3507.2	19392	16793.6	N.D.	3289.6
38	6 in.	04/12/2000	3308.8	N.D.	6387.2	56166.4	11296	N.D.	1049.6
39	1 ft.	04/12/2000	4819.2	N.D.	2659.2	13299.2	10694.4	N.D.	896.8
40	2 in.	04/12/2000	159	N.D.	170.5	354.6	22195.2	N.D.	N.D.
41	2 in.	04/12/2000	62.7	N.D.	N.D.	N.D.	6467.2	N.D.	N.D.
42	2 in.	04/12/2000	101.5	N.D.	277	405.2	13696	N.D.	667.6
43	2 in.	04/12/2000	44.4	N.D.	131.4	350.4	13798.4	N.D.	N.D.
44	2 in.	04/12/2000	80	N.D.	128.1	791.6	18995.2	N.D.	988.8
45	2 in.	04/12/2000	120.7	N.D.	472.4	962.4	17600	N.D.	N.D.
47	surface	04/12/2000	59955.2	1600	7187.2	1939.2	22195.2	N.D.	15795.2
48	surface	04/12/2000	142.5	69.5	648	277	42291.2	N.D.	N.D.
49	surface	04/12/2000	N.D.	40	166.3	N.D.	64563.2	N.D.	N.D.
50	1 ft.	04/12/2000	136.4	46.7	245	486	40192	N.D.	N.D.
51	2.5 ft.	04/12/2000	1040	N.D.	1668.8	206	7974.4	N.D.	642.4
52	6 in.	04/12/2000	1389.6	N.D.	8064	5920	6816	N.D.	1240
53	6 in.	04/12/2000	1680	N.D.	6188.8	N.D.	8416	N.D.	1229.6
54	1 ft.	04/12/2000	1828.8	N.D.	11699.2	N.D.	10796.8	N.D.	3699.2
55	surface	04/12/2000	296.4	N.D.	970.4	N.D.	1400	N.D.	237.6
56	6 in.	04/12/2000	2329.6	N.D.	5718.4	N.D.	7257.6	N.D.	1320
57	1 ft.	04/12/2000	1739.2	N.D.	3680	N.D.	5027.2	N.D.	964
58	6 in.	04/12/2000	4838.4	N.D.	5228.8	1360	13888	N.D.	1189.6
59	1 ft.	04/12/2000	2800	N.D.	11296	908.8	16396.8	N.D.	2548.8
61	surface	04/12/2000	26.5	N.D.	N.D.	N.D.	3068.8	N.D.	N.D.
62	surface	04/12/2000	N.D.	N.D.	121	N.D.	4387.2	N.D.	1480
63	surface	04/12/2000	34.4	N.D.	113.8	N.D.	3360	N.D.	478
64	surface	04/12/2000	33.7	N.D.	93.5	N.D.	3259.2	N.D.	N.D.
65	surface	04/12/2000	N.D.	N.D.	73.3	N.D.	3200	N.D.	N.D.
66	surface	04/12/2000	25.2	N.D.	66.2	N.D.	3859.2	N.D.	N.D.
67	surface	04/12/2000	N.D.	N.D.	86.7	N.D.	3868.8	N.D.	N.D.
68	surface	04/12/2000	N.D.	N.D.	N.D.	N.D.	4278.4	N.D.	596
69	surface	04/12/2000	36.6	N.D.	66.9	N.D.	4147.2	N.D.	N.D.
70	surface	04/12/2000	49.2	N.D.	118.3	N.D.	5318.4	N.D.	N.D.
71	surface	04/12/2000	110.3	N.D.	243.6	N.D.	13388.8	N.D.	1400
72	surface	04/12/2000	191.9	N.D.	423.2	N.D.	28083.2	N.D.	N.D.

* all concentrations are in parts per million (ppm)

APPENDIX A
4-MILE RADIUS MAP

4-Mile Radius Map



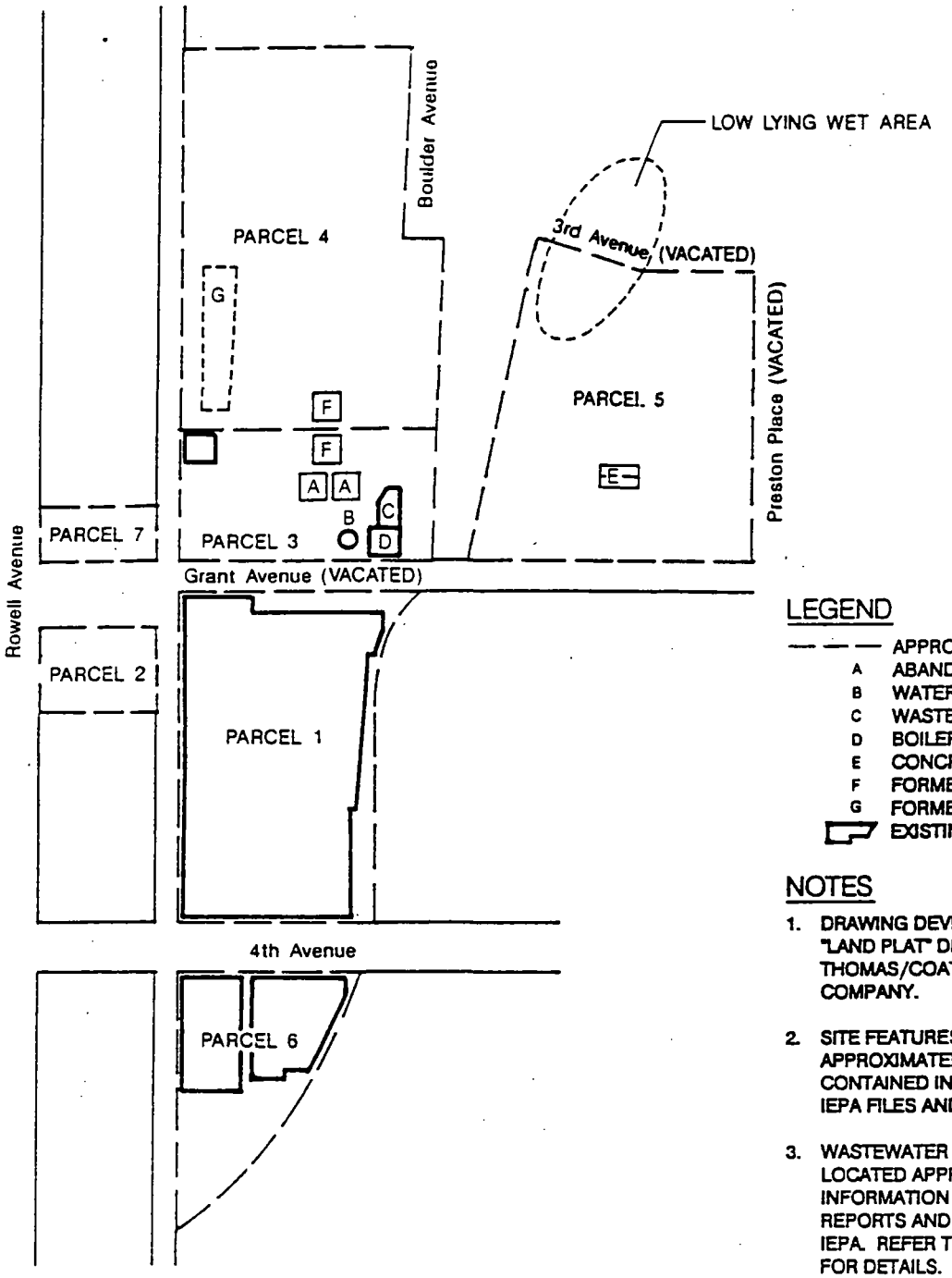
Map Scale

3 0 3 Miles

source: ARCVIEW 3.0 Will County

APPENDIX B
LENNON WALLPAPER FACILITY MAP

Lennon Wallpaper Facility Map



LEGEND

- APPROXIMATE PARCEL LINE
- A ABANDONED STORAGE PITS
- B WATER TANK
- C WASTEWATER TREATMENT
- D BOILER HOUSE
- E CONCRETE SLUDGE SETTLING BASINS
- F FORMER SETTLING PONDS
- G FORMER TRENCH/DRAINAGE DITCH
- EXISTING BUILDINGS

NOTES

1. DRAWING DEVELOPED FROM MODIFIED "LAND PLAT" DRAWING BY LLOYD-THOMAS/COATS & BURCHARD COMPANY.
2. SITE FEATURES HAVE BEEN LOCATED APPROXIMATELY BASED ON INFORMATION CONTAINED IN PREVIOUS SITE REPORTS, IEPA FILES AND AERIAL PHOTOGRAPHS
3. WASTEWATER TREATMENT FACILITIES LOCATED APPROXIMATELY BASED ON INFORMATION CONTAINED ON PREVIOUS REPORTS AND INFORMATION PROVIDED BY IEPA. REFER TO SECTION 2 OF REPORT FOR DETAILS.
4. PARCELS 1, 2 AND 6 ARE OWNED BY MR. DOUG SILVERMAN. PARCELS 3, 4, 5 AND 7 ARE OWNED BY LENNON WALL PAPER COMPAI AND CURRENTLY LEASED BY MR. SILVERMAN.

north

0 200 40

SCALE IN FEET

source: 1990 Workplan for Lennon Wallpaper
Prepared by Warzyn Engineering Inc.

APPENDIX C
TARGET COMPOUND LIST

TARGET COMPOUND LIST

Volatile Target Compounds

Chloromethane	1,2-Dichloropropane
Bromomethane	cis-1,3-Dichloropropene
Vinyl Chlorde	Trichloroethene
Chloroethane	Dibromochloromethane
Methylene Chloride	1,1,2-Trichloroethane
Acetone	Benzene
Carbon Disulfide	trans-1,3-Dichloropropene
1,1-Dichloroethene	Bromoform
1,1-Dichloroethane	4-Methyl-2-pentanone
1,2-Dichloroehtene (total)	2-Hexanone
Chloroform	Tetrachloroethene
1,2-Dichloroethane	1,1,2,2-Tetrachloroethane
2-Butanone	Toluene
1,1,1-Trichloroethane	Chlorobenzene
Carbon Tetrachloride	Ethylbenzene
Vinyl Acetate	Styrene
Bromodichloromethane	Xylenes (total)

Base/Neutral Target Compounds

Hexachloroethane	2,4-Dinitrotoluene
bis(2-Chloroethyl) Ether	Diethylphthalate
Benzyl Alcohol	N-Nitrosodiphenylamine
bis (2-Chloroisopropyl) Ether	Hexachlorobenzene
N-Nitroso-Di-n-Propylamine	Phenanthrene
Nitrobenzene	4-Bromophenyl-phenylether
Hexachlorobutadiene	Anthracene
2-Methylnaphthalene	Di-n-Butylphthalate
1,2,4-Trichlorobenzene	Fluoranthene

Isophorone	Pyrene
Naphthalene	Butylbenzylphthalate
4-Chloroaniline	bis(2-Ethylhexyl)Phthalate
bis(2-chloroethoxy)Methane	Chrysene
Hexachlorocyclopentadiene	Benzo(a)Anthracene
2-Chloronaphthalene	3-3'-Dichlorobenzidene
2-Nitroaniline	Di-n-Octyl Phthalate
Acenaphthylene	Benzo(b)Fluoranthene
3-Nitroaniline	Benzo(k)Fluoranthene
Acenaphthene	Benzo(a)Pyrene
Dibenzofuran	Ideno(1,2,3-cd)Pyrene
Dimethyl Phthalate	Dibenz(a,h)Anthracene
2,6-Dinitrotoluene	Benzo(g,h,i)Perylene
Fluorene	1,2-Dichlorobenzene
4-Nitroaniline	1,3-Dichlorobenzene
4-Chlorophenyl-phenylether	1,4-Dichlorobenzene

Acid Target Compounds

Benzoic Acid	2,4,6-Trichlorophenol
Phenol	2,4,5-Trichlorophenol
2-Chlorophenol	4-Chloro-3-methylphenol
2-Nitrophenol	2,4-Dinitrophenol
2-Methylphenol	2-Methyl-4,6-dinitrophenol
2,4-Dimethylphenol	Pentachlorophenol
4-Methylphenol	4-Nitrophenol
2,4-Dichlorophenol	

Pesticide/PCB Target Compounds

alpha-BHC	Endrin Ketone
beta-BHC	Endosulfan Sulfate
delta-BHC	Methoxychlor
gamma-BHC (Lindane)	alpha-Chlordane
Heptachlor	gamma-Chlordane
Aldrin	Toxaphene
Heptachlor epoxide	Aroclor-1016
Endosulfan I	Aroclor-1221
4,4'-DDE	Aroclor-1232
Dieldrin	Aroclor-1242
Endrin	Aroclor-1248
4,4'-DDD	Aroclor-1254
Endosulfan II	Aroclor-1260
4,4'-DDT	

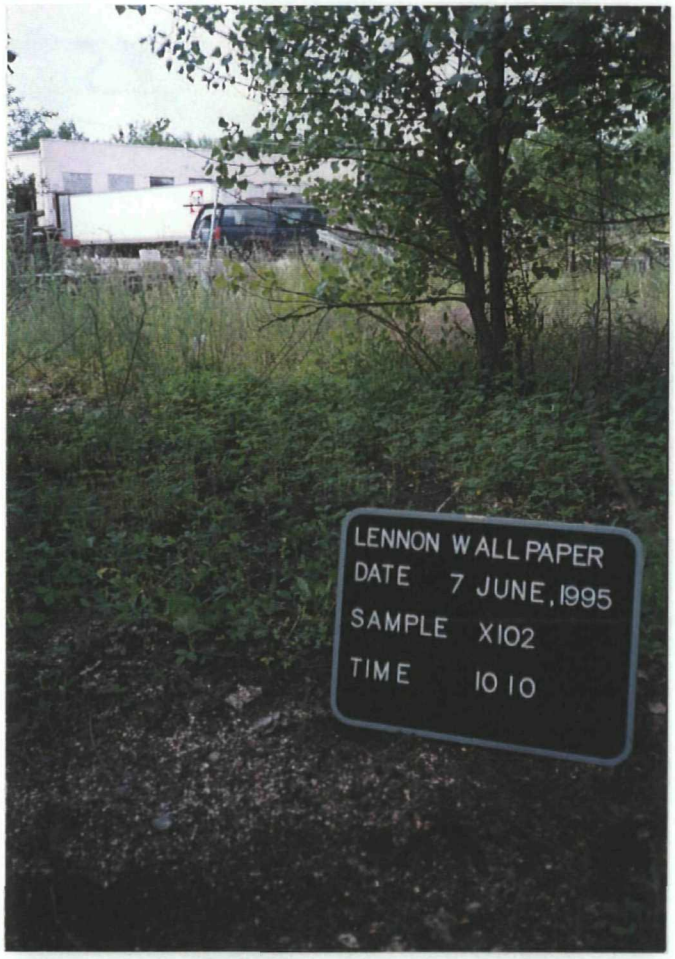
Inorganic Target Compounds

Aluminum	Manganese
Antimony	Mercury
Arsenic	Nickel
Barium	Potassium
Beryllium	Selenium
Cadmium	Silver
Calcium	Sodium
Chromium	Thallium
Cobolt	Vanadium
Copper	Zinc
Iron	Cyanide
Lead	Sulfide
Magnesium	

APPENDIX D
ILLINOIS EPA SAMPLE PHOTOGRAPHS

SITE NAME: Lennon Wallpaper	
CERCLIS ID: ILD 984 779 759	COUNTY: Will

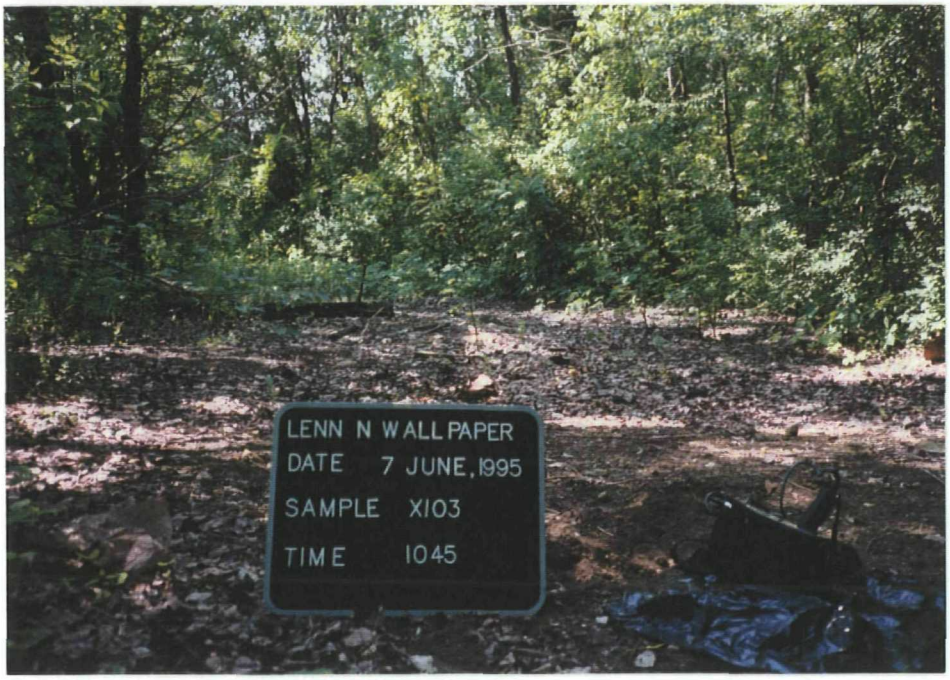
DATE: June 7, 1995
TIME: 10:10 a.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 3
ROLL NUMBER: 1
DIRECTION: Southwest
COMMENTS: Photo taken of sample X102



DATE: June 7, 1995
TIME: 10:10 a.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 4
ROLL NUMBER: 1
DIRECTION: West
COMMENTS: Photo taken of sample X102

SITE NAME: Lennon Wallpaper	
CERCLIS ID: ILD 984 779 759	**COUNTY:** Will

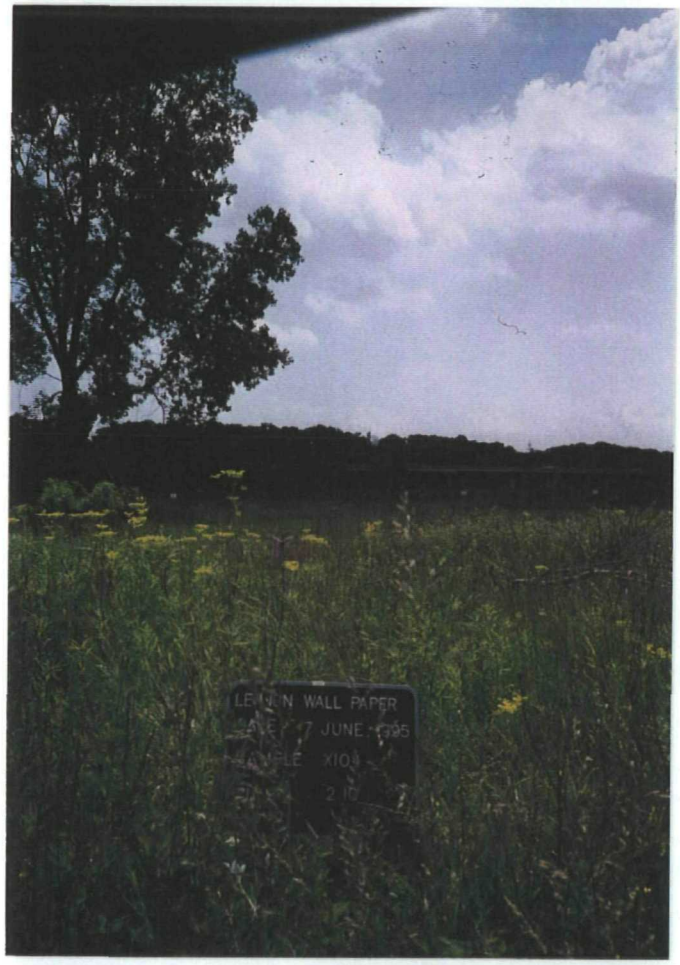
DATE: June 7, 1995
TIME: 10:45 a.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 5
ROLL NUMBER: 1
DIRECTION: East
COMMENTS: Photo taken of sample X103



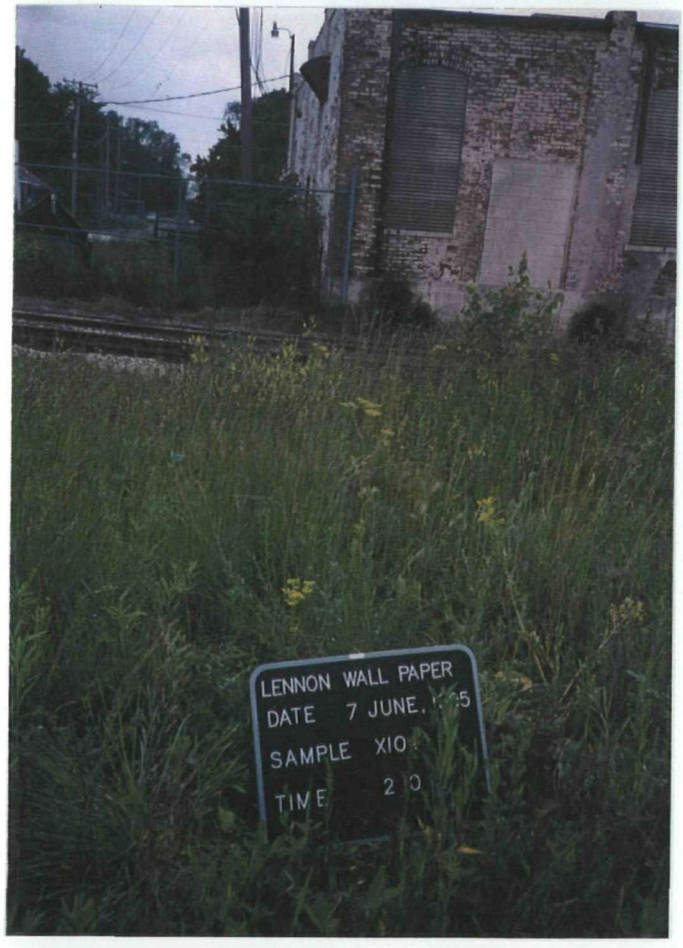
DATE: June 7, 1995
TIME: 10:45 a.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 6
ROLL NUMBER: 1
DIRECTION: South
COMMENTS: Photo taken of sample X103

SITE NAME: Lennon Wallpaper	
CERCLIS ID: ILD 984 779 759	**COUNTY:** Will

DATE: June 7, 1995
TIME: 2:1 p.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 7
ROLL NUMBER: 1
DIRECTION: S-southeast
COMMENTS: Photo taken of sample X104

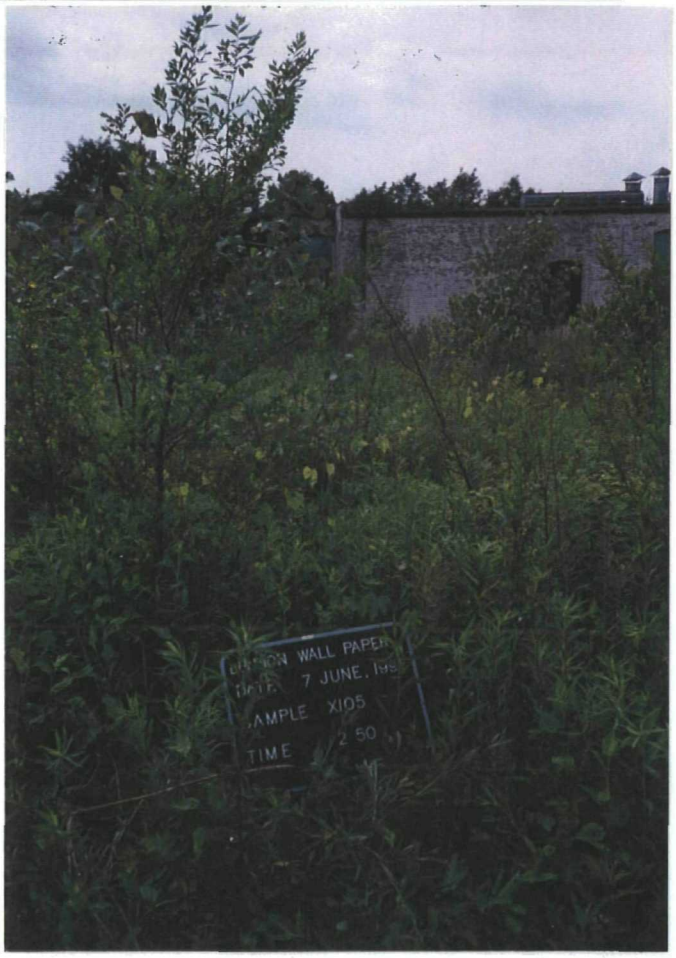


DATE: June 7, 1995
TIME: 2:10 p.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 8
ROLL NUMBER: 1
DIRECTION: West
COMMENTS: Photo taken of sample X104



SITE NAME: Lennon Wallpaper	
CERCLIS ID: ILD 984 779 759	**COUNTY:** Will

DATE: June 7, 1995
TIME: 2:50 p.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 10
ROLL NUMBER: 1
DIRECTION: West
COMMENTS: Photo taken of sample X105



DATE: June 7, 1995
TIME: 2:50 p.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 11
ROLL NUMBER: 1
DIRECTION: South
COMMENTS: Photo taken of sample X105

SITE NAME: Lennon Wallpaper	
CERCLIS ID: ILD 984 779 759	**COUNTY:** Will

DATE: June 7, 1995
TIME: 3:45 p.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 12
ROLL NUMBER: 2
DIRECTION: West
COMMENTS: Photo taken of sample X501 located at 354 Rowell Avenue

DATE: June 7, 1995
TIME: 3:45 p.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 13
ROLL NUMBER: 2
DIRECTION: East
COMMENTS: Photo taken of sample X501 located at 354 Rowell Avenue

SITE NAME: Lennon Wallpaper	
CERCLIS ID: ILD 984 779 759	**COUNTY:** Will

DATE: June 7, 1995
TIME: 4:00 p.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 14
ROLL NUMBER: 2
DIRECTION: East
COMMENTS: Photo taken of sample X502 located at 304 Rowell Avenue

DATE: June 7, 1995
TIME: 4:00 p.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 15
ROLL NUMBER: 2
DIRECTION: South
COMMENTS: Photo taken of sample X502 located at 304 Rowell Avenue

SITE NAME: Lennon Wallpaper	
CERCLIS ID: ILD 984 779 759	**COUNTY:** Will

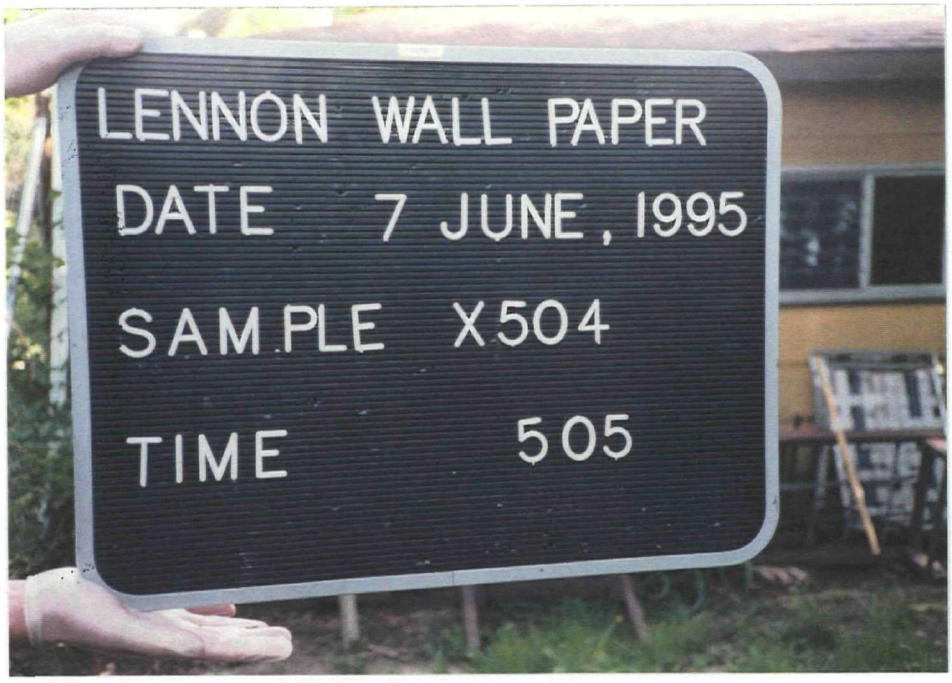
DATE: June 7, 1995
TIME: 4:30 p.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 16
ROLL NUMBER: 2
DIRECTION: East
COMMENTS: Photo taken of sample X503 located at 234 Rowell Avenue

DATE: June 7, 1995
TIME: 4:30 p.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 17
ROLL NUMBER: 2
DIRECTION: West
COMMENTS: Photo taken of sample X503 located at 234 Rowell Avenue

SITE NAME: Lennon Wallpaper	
CERCLIS ID: ILD 984 779 759	**COUNTY:** Will

DATE: June 7, 1995
TIME: 5:05 p.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 18
ROLL NUMBER: 2
DIRECTION: West
COMMENTS: Photo taken of sample X504 located at 226 Rowell Avenue

DATE: June 7, 1995
TIME: 5:05 p.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 19
ROLL NUMBER: 2
DIRECTION: South
COMMENTS: Photo taken of sample X504 located at 226 Rowell Avenue



SITE NAME: Lennon Wallpaper	
CERCLIS ID: ILD 984 779 759	COUNTY: Will

DATE: June 8, 1995
TIME: 9:10 a.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 20
ROLL NUMBER: 3
DIRECTION: West
COMMENTS: Photo taken of sample X505 located at 216 Rowell Avenue

DATE: June 8, 1995
TIME: 9:10 a.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 21
ROLL NUMBER: 3
DIRECTION: East
COMMENTS: Photo taken of sample X505 located at 216 Rowell Avenue

SITE NAME: Lennon Wallpaper	
CERCLIS ID: ILD 984 779 759	**COUNTY:** Will

DATE: June 8. 1995
TIME: 9:25 a.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 22
ROLL NUMBER: 3
DIRECTION: East
COMMENTS: Photo taken of sample X506 located at 208 Rowell Avenue

DATE: June 8, 1995
TIME: 9:25 a.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 23
ROLL NUMBER: 3
DIRECTION: West
COMMENTS: Photo taken of sample X506 located at 208 Rowell Avenue

SITE NAME: Lennon Wallpaper	
CERCLIS ID: ILD 984 779 759	**COUNTY:** Will

DATE: June 8, 1995
TIME: 9:45 a.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 24
ROLL NUMBER: 3
DIRECTION: South
COMMENTS: Photo taken of sample X507/X508 located at 806-816 Second Avenue (X508 is a duplicate sample of X507)

DATE: June 8, 1995
TIME: 9:45 a.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 25
ROLL NUMBER: 3
DIRECTION: North
COMMENTS: Photo taken of sample X507/X508 located at 806-816 Second Avenue (X508 is a duplicate sample of X507)

SITE NAME: Lennon Wallpaper	
CERCLIS ID: ILD 984 779 759	**COUNTY:** Will

DATE: June 8, 1995
TIME: 10:05 a.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 26
ROLL NUMBER: 3
DIRECTION: South
COMMENTS: Photo taken of sample X509 located at 820 Second Street

DATE: June 8, 1995
TIME: 10:05 a.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 27
ROLL NUMBER: 3
DIRECTION: West
COMMENTS: Photo taken of sample X509 located 820 Second Street

SITE NAME: Lennon Wallpaper	
CERCLIS ID: ILD 984 779 759	**COUNTY:** Will

DATE: June 8, 1995
TIME: 10:30 a.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 28
ROLL NUMBER: 3
DIRECTION: East
COMMENTS: Photo taken of sample X101 located Woodland School

DATE: June 8, 1995
TIME: 10:30 a.m.
PHOTO BY: Kim Hubbert
PHOTO NUMBER: 29
ROLL NUMBER: 3
DIRECTION: N-northeast
COMMENTS: Photo taken of sample X101 located at Woodland School